



## UM603S

## LINEAR INTEGRATED CIRCUIT

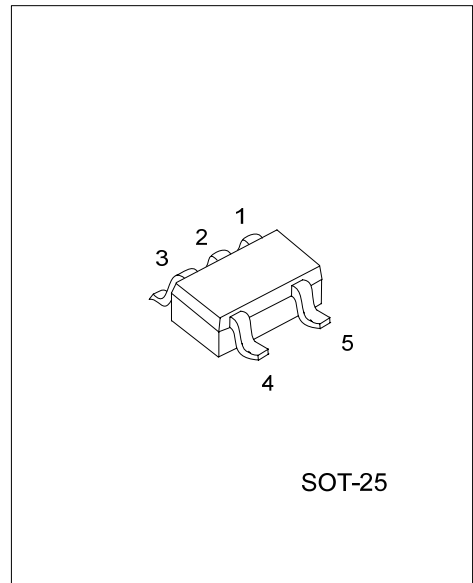
### OPERATIONAL AMPLIFIERS WITH 2.5V SHUNT REGULATOR

#### DESCRIPTION

UTC **UM603S** that is designed to include 2 op amp and one shunt regulator for battery charger and AC adapter application.

#### FEATURES

- \* Small SOT-25 package
- \* Internal accurate 2.5V  $V_{REF}$
- \* Reduced external components



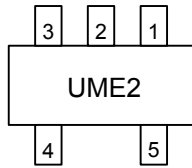
\*Pb-free plating product number:UM603SL

#### ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead Free Plating		
UM603S-AF5-R	UM603SL-AF5-R	SOT-25	Tape Reel

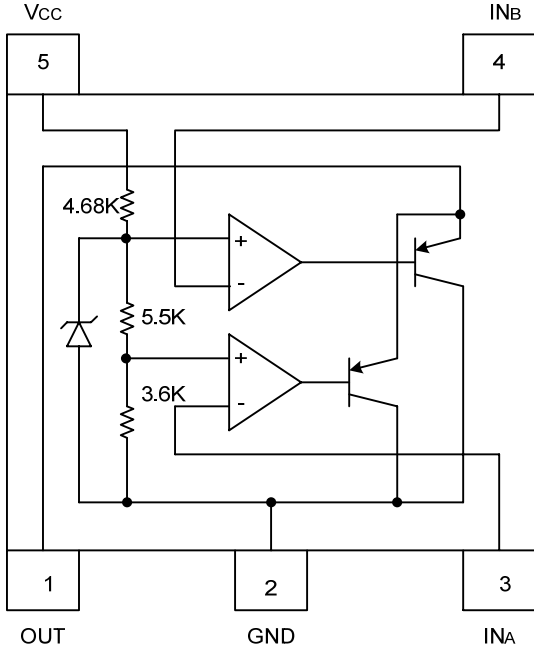
<p>UM603SL-AF5-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Plating</p>	<p>(1) R: Tape Reel (2) AF5: SOT-25 (3) L: Lead Free Plating, Blank: Pb/Sn</p>
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### MARKING AND PIN DESCRIPTION



PIN NO.	PIN NAME	FUNCTION	INTERNAL CIRCUIT DIAGRAM
1	OUT	Output Pin	
2	GND	Ground	
3	IN <sub>A</sub>	Input Pin	
4	IN <sub>B</sub>		
5	V <sub>CC</sub>	Supply Voltage	

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

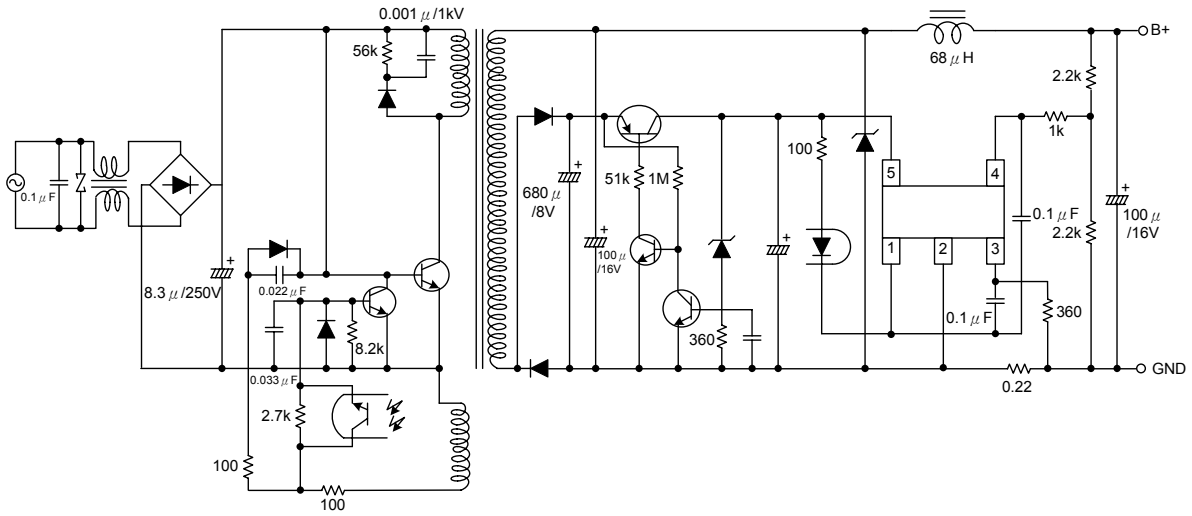
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sub>CC</sub>	-0.3 ~ +20	V
Recommended Operating Voltage	V <sub>OPR</sub>	+4 ~ +20	V
Allowable loss	P <sub>D</sub>	250	mW
Operating Temperature	T <sub>OPR</sub>	-25 ~ +85	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (V<sub>CC</sub>=5V, Ta=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current Consumption	I <sub>CC</sub>	IN <sub>A</sub> =0V, IN <sub>B</sub> =0V, R <sub>L</sub> =∞		1.2	1.7	mA
<b>A Amplifier</b>						
Output Inverting Voltage	V <sub>A</sub>	IN <sub>A</sub> =0V, R <sub>L</sub> =4.3k	2.45	2.50	2.55	V
Output Sink Current	I <sub>O(SINK A)</sub>	IN <sub>B</sub> =2.7V, IN <sub>A</sub> =0V, V <sub>OUT</sub> =1.5V	5			mA
Input Bias Current	I <sub>I(BIAS A)</sub>	IN <sub>A</sub> =0V, R <sub>L</sub> =4.3k		50	140	nA
PSRR	PSRR(A)	IN <sub>A</sub> =0V, R <sub>L</sub> =4.3k	62			dB
<b>B Amplifier</b>						
Output Inverting Voltage	V <sub>B</sub>	IN <sub>B</sub> =0V, R <sub>L</sub> =4.3k	152		160	mV
Output Sink Current	I <sub>O(SINK B)</sub>	IN <sub>B</sub> =0V, IN <sub>A</sub> =0.17V, V <sub>OUT</sub> =1.5V	5			mA
Input Bias Current	I <sub>I(BIAS B)</sub>	IN <sub>B</sub> =0V, R <sub>L</sub> =4.3k		50	140	nA
PSRR	PSRR(B)	IN <sub>B</sub> =0V, R <sub>L</sub> =4.3k	65			dB

## ■ APPLICATION CIRCUIT



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